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The Effect of Spousal Violence on Fertility Desire

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Abstract

Much of the previous research on the effect of spousal violence on reproductive behaviour focuses on unintended pregnancy and fertility. This paper examines the effects of women's experiences of violence perpetrated by their husbands in the past year on their desire to have on their desire for a (another child). The basic premise of the study is that the effect of spousal violence on fertility desire depends on the form of violence and the number of children women have. Drawing on India's 2019-21 National Family Health Survey, our analysis shows that spousal violence does not have a significant bearing on fertility desire for women with no children. Physical violence has a positive and significant effect on the desire for an additional child for women with one or two children, although it is explained away by the background characteristics that affect violence and/or fertility desire. The effect of sexual violence on fertility desire is negative and marginally significant, but only for women with three or more children. However, emotional violence exerts a significant effect on the desire to have another child for women with two children, even when a range of background variables is held constant.

Keywords

Fertility, Fertility
Desire,
Reproductive
Behaviour, Spousal
Violence

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Introduction

Spousal violence (sometimes referred to as intimate partner violence) against women is a global social problem. Its prevalence varies significantly from one country to another, with India at the higher end of the continuum (Bott et al. 2012; Devries 2010; García-Moreno et al. 2005; Hindin, Kishor, and Ansara 2008; Kalokhe et al. 2017; WHO 2002: Chapter 4). According to India's 2019-21 National Family Health Survey (NFHS-5), about one-third of ever-married women aged 18-49 had experienced some form of physical, emotional, or sexual violence in their lifetime, which is perpetrated by their husbands, and over one-quarter (27 percent) had experienced at least one of these forms of violence during the past twelve months (IIPS and ICF 2021). Somewhat similar findings have been reported in studies based on several large-scale surveys conducted in various parts of the developing world (Andersson et al. 2007; Bott et al. 2012; García-Moreno et al. 2005; Friedmann-Sanchez 2012; Hindin, Kishor, and Ansara 2008; Kishor and Johnson 2002, 2004; Naved and Persson 2005; WHO 2013; Xiao Xu et al. 2005). Because of the sensitivity and stigma attached to this subject, these figures are probably an underestimate; the actual level could be higher (Koenig et al. 2006).

Spousal violence has been linked to numerous adverse social and health consequences for women, children, and their families (García-Moreno et al. 2005; Hindin, Kishor, and Ansara 2008; Kishor and Johnson 2004; WHO 2013). Most previous studies on the effect of spousal violence on women's reproductive behaviour focus on unintended pregnancy, contraceptive use, abortion, and miscarriage (Anand, Unisa, and Singh 2017; Begum et al. 2010; Bramhankar and Reshmi 2021;

Stephenson et al. 2008). Little is known about the effect of spousal violence on childbearing that is intended. This is partly because of the difficulty in establishing the cause-effect relationship between spousal violence and fertility in a cross-sectional study. It is not clear if it is due to violence that a woman gets pregnant and has a child, or if it is because of her pregnancy or the birth of a child that she is subjected to violence. Moreover, many women subjected to violence may not have full control over their reproductive behaviour, since at times husbands may demonstrate their coercive control and dominance over their wives by forcing them to have more children (Stieglitz et al. 2018). Fertility desire rather than actual reproductive performance, which is a reasonable proxy for intended fertility, is supposed to overcome these conceptual problems. Thus, using data from India's 2019-21 National Family Health Survey (NFHS-5), this paper examines the effect of spousal violence in the year preceding the survey on women's desire to have a (another) child. Since the direction of causality flows from spousal violence to fertility desire, the study allows us to draw the inference of a cause-and-effect relationship between the two variables.

Literature, Theoretical Issues, and Hypotheses

There is a rich literature on the effects of various measures of spousal conflict (e.g., marital instability, marital disruption, and marital unhappiness) on reproductive behavior. Some of the most influential studies on this subject have originated from the economics of marital instability (Becker, Landes, and Michael 1977). Lillard and Waite's (1993; see also Waite and Lillard 1991) analysis of the relationship between marital disruption

and childbearing is one such work that is highly relevant to the present study. Lillard and Waite hypothesize that the prospect of marital dissolution has a negative impact on childbearing. That is, couples who anticipate that their marriage may not last longer would be highly apprehensive about having a (another) child. They argue that children represent a “marriage-specific capital”, which increases the value of marriage for couples. However, it increases the cost as well; if a marriage is dissolved, the return to the capital is diminished. Marital dissolution is a costly affair for couples if young children are involved. Usually, the burden of marital dissolution falls on the shoulders of women since in most instances, children tend to stay with their mothers after a divorce. Moreover, divorced mothers with young children are less likely to get remarried.

By analyzing data from the U.S. Panel Study of Income Dynamics, Lillard and Waite (1993) find “that the hazard of disruption has a strong negative effect on the hazard of marital childbearing: it lengthens the intervals between births and decreases the chances that a child will be born.” The study further finds that the effect is more substantial for women who have at least one child, compared with childless women. This is partly because childless women tend to face socio-cultural pressure to have at least one child, whereas those with some children evaluate the potential consequences of additional children for the relationship. By extrapolating these observations, it is hypothesized that women subjected to spousal violence are less likely to desire to have children, compared with those with no such experiences.

This hypothesis is also consistent with research that shows that excess stress and anxiety—whether it is social, economic, or psychological—have a deterrent effect on childbearing. It is postulated that stressed individuals tend to be ambivalent about having children and therefore avoid intercourse or use family planning methods to avoid pregnancy (Alio et al. 2009; Dalal, Andrews, and Dawad 2011, 2012; Fanslow et al. 2008; Kidman, Palermo, and Bertrand 2015; Raj et al. 2015; Tsai, Cappa, and Petrowsky 2016). The abusive relationship gives rise to stress, which in turn results in a decreased interest in sexual relations and a reduced desire for children. Also, couples may not want to have more children because of the perception that the pressure of a (another) child could augment their stress level and make conditions worse. Moreover, they may not want to raise a child in a hostile family environment. Wives having relationship issues may be uncertain about the future of their relationship or marriage; they may not be certain if they will continue living in a troubled marriage and how long their relationship will last (Lainiala 2011; Lillard and Waite 1993; Thornton 1978).

There is yet another hypothesis that points to the role of biological mechanisms that link stress to reduced fertility or infertility (Lynch et al. 2014). It is postulated that conflicts within a relationship can affect the imbalanced cortisol—the primary stress hormone—which results in lower sex desire (low libido) (Hamilton and Meston 2013). This view reinforces the above hypothesis on the depressing effect of spousal violence on fertility.

Friedman, Hechter, and Kanmazawa (1994) offer an alternative hypothesis. Building on the theory of the value of children (Hoffman and Hoffman 1973; Hoffman and Manis 1979), they propose the “uncertainty reduction theory of parenthood.” According to this theory, *“the impetus for parenthood is greatest among those whose alternative pathways for reducing uncertainty are limited or blocked”* (original italicization). That is, the potential instability of the marriage has a positive effect on the desire for a child. This postulate is particularly applicable to women experiencing spousal violence in a country such as India, where most women do not have much say in family affairs, let alone reproductive decisions. Also, these women are so economically dependent on their husbands that they do not think about leaving an abusive relationship. The cultural acceptance of motherhood is so deeply ingrained that unlike in most industrialized countries, the idea of marriage without children is not considered an option. A couple without a child may be looked down upon, whereas a couple might be uneasy having just one child from the points of high infant mortality or inadequate child development. Most couples would like to have at least two children, one of which must be a boy. This may also happen because of sexual and reproductive coercion from partners, husbands, or other family members, lack of control over some kind of birth control methods, and fear of husbands for using non-negotiable contraception (Bawah et al. 1999; Bott et al. 2012; Ezeh 1993; Ghule et al. 2015; Heise, Ellsberg, and Gottemoeller 1999; Krug et al. 2002; Miller et al. 2010; Pallitto and O’Campo 2004; Silverman et al. 2011; Wilson-Williams et al. 2008). Since there is a strong stigma against divorce and childlessness,

couples even when they are exposed to continuous domestic violence, stay together for the sake of children and continue having children. Having a child is supposed to bring couples in a turbulent relationship closer together. There is evidence that women exposed to an abusive relationship may want to have children for the sake of marriage and to improve marital solidarity (Bulato 1981; Cain, Khanam, and Nahar 1979; Liefbroer, 2005). According to this theory, therefore, women in troubled relationships use childbearing as a strategy to enhance marital solidarity and reduce marital uncertainty. Thus, it is hypothesized that women who experience spousal violence are more likely than those with no such experiences to want to have a (another) child.

Empirical studies are inconclusive in their support for the uncertainty reduction theory. Using data from six waves of the Panel Study of Social Integration in the Netherlands, Rijken and Liefbroer (2009) find the negative as well as positive effects of a troubled relationship on fertility. The researchers assert that “the more negative interaction is going on in a couple of relationships, the more likely it is that this couple will postpone childbearing.” They state further that “experiencing a lot of positive partner interaction seems to lead to the postponement of childbearing as well. This suggests that couples with low levels of positive interaction might opt for a (another) child to revitalize their relationship.” These conflicting findings may have occurred because of the simultaneous inclusion of the measures of both negative and positive interactions in the same statistical model. In another study based on the Finnish Well-being and Social Relationships Survey, Lainiala

(2011) arrives at a somewhat similar conclusion. The study finds that low-quality relationships measured at the survey date do not increase the odds of having a child during the next three years. Instead, women with a child in medium and high-quality relationships are most likely to have children. Myers' American study (1997) also does not find any evidence of the effect of divorce proneness and marital uncertainty on childbearing. Instead, marital happiness and compatibility between spouses encourage the enhancement of marital solidarity and childbearing.

In this study, we suggest that the effect of spousal violence on fertility desire depends on the ways violence and fertility desire are conceptualized. The definition of spousal violence is broad, varying from coercive and abusive tactics employed by a partner "to gain power and control over another partner" to life-threatening acts and even homicide and suicide. Researchers have identified three forms of spousal violence— physical, emotional, and sexual—although they often coexist (Ellsberg et al. 2000; Garcia-Moreno et al. 2005; Martin et al. 1999a, 1999b; WHO 2002: 89-92). Physical violence is usually thought to be most threatening to women and has adverse physical as well as psychological consequences. It could also lead to sexual violence and unintended pregnancy. Many husbands who are physically violent against their wives get engaged in non-consensual sex with them and often physically force their wives to have sex with them. These acts can have long-lasting emotional problems among women, including depression, anxiety, shame, guilt, isolation, lack of self-esteem, and the like. Emotional abuse which often includes

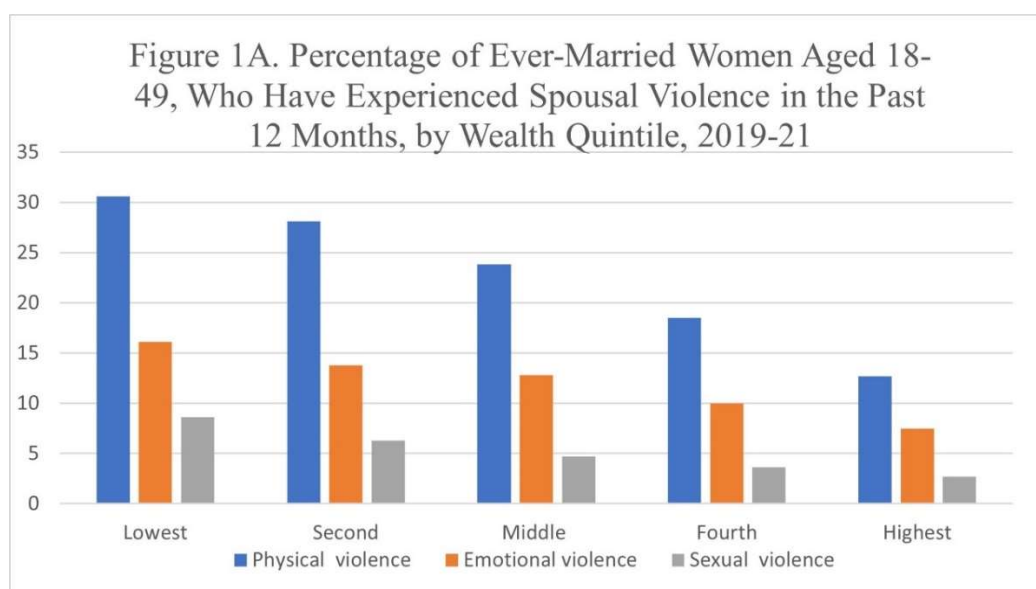
persistent humiliation, insults, and neglect can lead to heated arguments and physical violence.

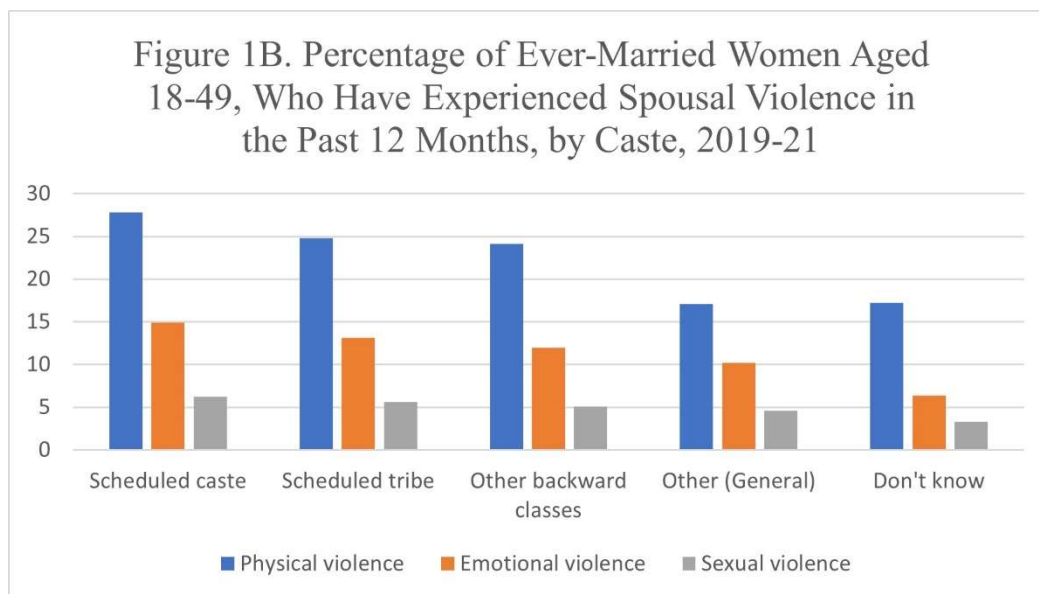
Physical abuse perpetrated by husbands is often seen to be most traumatic and threatening to women, although at times emotional abuse may be equally or even more detrimental than physical abuse to women's well-being (Follingstad et al. 1990, Lawrence et al. 2009). Physical violence against women gets more coverage than emotional violence in the academic and popular literature because it tends to leave visible scars and physically abused women are more likely to report marital dissatisfaction, separation, and divorce as a result of abuse. Emotional violence sometimes known as the "hidden form of abuse" does not have backing from any tangible evidence and therefore not as likely to be reported. However, its effect could be lingering and long-lasting. Women subjected to emotional violence may realize only in the long run that they have been abused.

The three forms of spousal violence are also different from each other because they represent people from different socioeconomic and cultural backgrounds. Women subjected to physical violence and sexual violence have often been found to be coming from a lower socioeconomic background, while those subjected to emotional violence come from all kinds of backgrounds. To illustrate this observation, in Figures 1A and 1B we present the percentage of ever-married women aged 18-49, who reported in the 2019-21 survey (NFHS-5) to have experienced physical, emotional, and sexual violence perpetrated by their husbands in the past twelve months, by their wealth status (wealth quintile) and

caste—two important measures of socioeconomic status in Indian society (IIPS and ICF 2021). The wealth quintile is inversely associated with all three measures of spousal violence, although its association with physical violence is much stronger than with emotional or sexual violence. Among women from the lowest (poorest) quintile, almost one-third (31 percent) reported having experienced physical violence in the year before the survey. This proportion decreases monotonically with the increase in wealth status to 28 percent among those from the second quintile, 24 percent among those from the middle quintile, 19 percent among those from the fourth quintile, and 13 percent among those from the highest (richest) quintile. The pattern of the relationship between wealth status and emotional violence is relatively modest, with the corresponding percentage decreasing from 16 percent among the poorest to 8 percent among the richest. The prevalence of sexual violence is not only much lower, but its relationship with wealth status is also modest.

The pattern of association between caste and the three measures of violence is also somewhat similar. About 28 percent of women from scheduled castes (ex-untouchables) and 24-25 percent from scheduled tribes (indigenous people) and other backward classes but only 17 percent from the general (forward) castes have experienced physical violence, thereby suggesting that women from the disadvantaged groups are more likely to be subjected to physical abuse. Patterns are similar but less pronounced in the case of emotional and sexual violence. Fairly similar patterns emerge when the relationships between these measures of spousal violence and other background factors are examined (not shown). It is fair to conclude that the effects of three measures of spousal violence on women's thinking and behavior—including fertility—are likely to be different in terms of their intensity when background characteristics are considered.





There are two views on conceptualizing fertility desire. According to the first view, fertility decisions are usually fixed early in life depending on the ultimate or targeted family size. In the Indian social context, for example, most women want to have at least two children, one of each sex. According to the second view, most couples make fertility decisions one at a time, depending on their socio-economic circumstances and the number of children they already have (Casterline and Agyei-Mensah 2017; Namboodiri 1974, 1983; Udry 1983). For example, the fertility desire for a woman with one child may get modified as she moves into the later stages of the life cycle and has another child. Much of the demographic research concurs with this parity-specific decision-making approach. In India where childlessness is almost nonexistent and most women want to have a child, it is fair to assume that regardless of their experiences of spousal abuse, most zero-parity women would like to have a child. Similarly, the effect of spousal abuse on fertility desire among women with three or more children is also likely to be minimal since

most of these women may have already reached their desired family size. The effect of spousal violence on fertility desire is likely to be most pronounced among women with one or two children.

Materials and Methods

The Sample

As mentioned above, data for this study came from India's NFHS-5, which was carried out in 2019-21. This survey was designed to provide estimates on various aspects of demographic behavior, including spousal violence and fertility. The survey was based on a stratified random sampling procedure. Data were collected by interviewing 724,115 women, aged 15-49, with a response rate of 97%. However, the sample of the women who were randomly selected to answer questions related to spousal violence was much smaller (i.e., 72,056) and confined to those aged 18-44. Analyses for the present study are based on a weighted sample of 26,308 currently married women. We excluded women who were either pregnant at the time of the survey or were sterilized, or whose husbands were sterilized,

and who were undecided about their desire to have a (another) child. These restrictions were considered to ensure that the statistics on the desire for a child were not underestimated.

Spousal violence as the primary independent variable

In NFHS-5, data on spousal violence against wives were collected primarily via two items: (1) the occurrence of some form of violence perpetrated by the husband, which a wife has experienced during her life since getting married (lifetime experience); and (2) the occurrence of some form of violence by the husband which a wife has experienced during the past twelve months (current experience). In this study, a measure of the current experience over the lifetime experience is chosen as it refers to a reference period, i.e., twelve months preceding the survey. The one-year period is long enough to capture sufficient data on violence, and, unlike lifetime experience, it is less contaminated by recall problems. According to NFHS-5, 22.9 percent of ever-married women aged 18-49 were subjected to physical violence perpetrated by their husbands in the past twelve months, while 10.3 percent were subjected to emotional violence and just 4.5 percent were subjected to sexual violence.

As mentioned above, the survey collected data on physical, emotional, and sexual violence. Physical violence was measured by the following set of questions that were asked of wives. Did her husband do the following things to her: a) slap her; b) twist her arm or pull her hair; c) push her, shake her, or throw something at her; d) punch her with his fist or with something that could hurt her; e) kick her, drag her or beat her up; f) try to choke her or burn her on purpose; and g) threaten or

attack her with a knife, gun, or any other weapon. Emotional violence was derived from the following items: a) something to humiliate her in front of others; b) threaten to hurt or harm her or someone close to her, and c) insult her or make her feel bad about herself. Sexual violence was measured by the following two items: (a) physically forced her to have sexual intercourse with him even when she did not want to, and (b) forced her to perform any sexual acts she did not want to.

The three measures of spousal violence vary in terms of the degree of reliability. Statistics on physical violence are supposed to be most reliable because they can be collected objectively from the information on the specific acts of violence in the reference period, and also because there is less stigma attached to their reporting (Ruiz-Pérez, Plazaola-Castaño, and Vives-Cases 2007). However, in the Indian socio-cultural context statistics on sexual violence are least reliable and highly underestimated because of the stigma attached to reports on sexual relations and sexual violence, especially that committed by an intimate partner or husband. Moreover, it is often difficult to differentiate between non-consensual sex and sexual violence in marriage. Reports on emotional violence are also biased because of their being highly subjective. However, they are supposed to be more reliable than sexual violence, though not as reliable as physical violence.

Fertility desire as the dependent variable

The dependent variable, fertility desire, was measured by asking women if they wanted to have a (another) child. This variable, which is supposed to be intentional and prospective, is strongly associated with the current and future fertility outcomes (Bongaarts 1990;

Freitas and Testa 2017; Morgan and Rackin 2010; Schoen et al. 1999). It was constructed from the following question that was asked to married women: “Would you like to have (a/another) child?” There were two possible answers to this question: No and Yes, and Undecided.

Control variables

There are two sets of control variables in this study. The first set includes two bio-demographic covariates—woman’s age and duration of the marriage—which are closely linked to fertility desire. However, they are also strongly correlated with spousal violence. Studies show that the prevalence of spousal violence tends to increase with the woman’s age as well as the duration of the marriage, although this may have to do with the number of children. The second set includes eight variables—wife’s education, husband’s education, household wealth quintile (a proxy measure for the current economic status of the household), region of residence (North, South, East, West, Central, and Northeast), place of residence (rural versus urban), religion, caste, and women’s access to money that she alone can decide how to use (a proxy measure for women’s empowerment). These variables basically measure the socioeconomic background of women, which affects both spousal violence as well as fertility desire.

Method of analysis

The basic approach to the analysis is to estimate the effect of spousal violence on fertility desire. We use a multinomial logistic regression model to estimate log odds of women’s desire to have a (another) child. This technique is basically an extension of the binary logistic model that allows for more than two categories of the dependent variable. Like

the binary logistic model, its parameters are estimated using the maximum likelihood method. This technique is appropriate for our analysis since there are response categories—No and Yes—of the question on fertility desire. In this study, the information on spousal violence was obtained by asking women about their experiences of some form of physical, emotional, or sexual violence that was perpetrated by their husbands in the twelve months preceding the survey. Thus, the direction of causality flows from spousal violence to the desire for one or more children, thereby allowing the inference of a cause-and-effect relationship between the two variables.

Results

Description of the Sample

Table 1 shows the demographic and socioeconomic characteristics of the sample women. Although the study sample is restricted to currently married women aged 15-49, with one or more children, it appears to be representative of the total population of India. For example, the rural-urban distribution of women is 68 percent versus 33 percent, strikingly like that observed in the 2011 Census of India (69 percent versus 31 percent). In this sample, 79 percent of the women belong to the Hindu religion, 16 percent to the Muslim religion, and the remaining 5 percent to other religious groups. The corresponding distribution of India’s population is close (80 percent, 14 percent, and 6 percent). In 2011, 35 percent of men and 19 percent of women aged seven and above were illiterate. Corresponding figures for the sample are smaller, at 20 percent and 13 percent, which is to be expected as the sample includes women aged 15-49 and men aged 15-54.

Table 1 Distribution of Currently Married Women Aged 18-44 by Background Characteristics

Independent Variables	Total	0 child	1 child	2 children	3+ children
Physical violence					
No	77.1	81.5	78.9	78.4	70.5
Yes	22.9	18.5	21.1	21.6	29.5
Emotional Violence					
No	89.7	91.0	90.5	89.6	88.1
Yes	10.3	9.0	9.5	10.4	11.9
Sexual violence					
No	95.5	96.4	96.4	95.8	93.7
Yes	4.5	3.6	3.6	4.2	6.3
Woman's age					
18-24	26.0	57.0	39.3	16.4	4.4
25-34	44.5	33.8	43.9	51.6	41.5
35+	29.5	9.2	16.7	32.0	54.1
Duration of marriage					
0-3	19.2	66.8	31.3	2.1	0.1
4-6	16.0	13.6	26.8	16.3	2.7
7-9	14.5	6.7	15.2	19.9	10.9
10+	50.2	12.8	26.7	61.7	86.3
Wife's education					
No schooling	20.0	13.0	9.7	15.4	43.6
1-4 years	6.0	4.2	3.5	6.5	9.5
5-7 years	13.9	10.4	10.8	16.7	16.4
8-9 years	17.8	16.4	19.5	19.1	14.4
10-11 years	13.8	17.2	16.3	14.0	8.3
12+	28.5	38.7	40.2	28.3	7.7
Husband's education					
No schooling	13.4	10.6	7.9	10.6	25.8
1-4 years	6.1	4.4	4.4	6.8	8.4
5-7 years	13.5	10.9	10.9	14.7	16.8
8-9 years	18.2	17.3	17.3	19.0	18.7
10-11 years	16.8	16.9	17.6	17.6	14.4
12+	32.0	39.9	41.8	31.3	15.8
Place of residence					
Rural	32.3	31.7	36.8	35.1	22.9
Urban	67.7	68.3	63.2	64.9	77.1
Region					
South	15.9	23.3	22.4	13.8	6.2
North	9.3	7.9	8.2	11.5	8.8
Central	15.2	12.0	10.4	13.9	24.7
East	32.2	28.8	29.9	30.6	39.4
Northeast	6.1	3.9	6.1	6.9	6.4
West	21.2	24.2	23.0	23.3	14.6
Religion					
Hindu	78.6	81.5	82.9	80.0	69.4
Muslim	16.4	12.6	11.7	14.9	26.6
Other	5.0	5.9	5.4	5.1	4.0
Caste					
General (Forward)	25.0	21.4	26.9	27.1	21.8
Scheduled castes	22.3	25.9	22.5	20.5	22.5
Scheduled tribes	9.1	8.6	9.2	8.6	9.8
Other backward castes	42.7	43.6	40.8	42.6	44.9
Don't know	0.9	0.5	0.6	1.2	1.0
Wealth quintile					
Lowest (Poorest)	19.8	17.5	13.4	17.3	32.8
Second (Poorer)	21.2	19.1	17.6	22.1	25.7
Middle	19.5	19.5	20.5	18.6	19.2
Fourth (Richer)	20.1	23.4	23.3	20.4	13.5
Highest (Richest)	19.5	20.5	25.2	21.7	8.8
Women's access to money					
No	45.1	47.4	43.2	45.6	45.5
Yes	54.9	52.6	56.8	54.4	54.5
N	26,308	2,761	7,481	9,055	7,011
Percent	100.0	10.5	28.4	34.4	26.6

The demographic characteristics of the sample appear to be conducive to strong fertility desires. The majority (71 percent) of the women are in their early and mid-reproductive age groups; slightly over one-third (35 percent) have been married for less than seven years, one-tenth have no children, and 28 percent have only one child. On the other hand, about one-fourth are illiterate or barely literate; and almost three-fourths belong to relatively disadvantaged castes (scheduled caste, scheduled tribe, and other backward classes). However, there appears to be a modest level of women's empowerment, with 55 percent of them having access to money, which is at their disposal.

Bivariate Relationship between Spousal Violence and Fertility Desire by Number of Children

Table 2 presents the percentage distribution of women by the three forms of spousal violence, fertility desire, and the number of living children. At this level of analysis, the findings on the association between every measure of violence and the desire for a child are mixed. There are three noteworthy observations. First, as expected, the proportion of women with or without experiences of spousal

violence who desire to have a child is highest for those with no children but declines with every increase in the number of children. For example, among women who have experienced physical violence perpetrated by their husbands, 96 percent with no children desire to have a child. This figure declines to 78 percent for those with one child, 23 percent for those with two children, and 11 percent for those with three or more children. The patterns are highly similar for women who have experienced emotional or sexual violence.

Second, the association between every form of spousal violence and fertility desire tends to be weak and non-significant for women with no children as well as for those with three or more children. For example, among women with no children, 95.2 percent of those who have experienced physical violence and 96.1 percent without such experience desire to have a child. The corresponding figures are 8.7 percent and 10.9 percent for women who have three or more children. Once again, the patterns are similar for women who have experienced emotional or sexual violence.

Table 2 Percentage Distribution of Currently Married Women Aged 18-44, by Desire to Have a (Another) Child and Number of Living Children

Independent Variables	0 child			1 child			2 children			3+ children		
	No	Yes	Total	No	Yes	Total	No	Yes	Total	No	Yes	Total
Physical violence												
No	4.8	95.2	100.0	27.6	72.4	100.0	81.6	18.4	100.0	91.3	8.7	100.0
Yes	3.9	96.1	100.0	22.5	77.5	100.0	77.2	22.8	100.0	89.1	10.9	100.0
Chi-square	[p=0.405]			[p=0.003]			[p<0.001]			[p=0.257]		
Emotional Violence												
No	4.7	95.3	100.0	26.4	73.6	100.0	81.4	18.6	100.0	90.9	9.1	100.0
Yes	3.7	96.3	100.0	27.7	72.3	100.0	74.4	25.6	100.0	89.1	10.9	100.0
Chi-square	[p=0.130]			[p=0.984]			[p=0.003]			[p=0.038]		
Sexual violence												
No	4.6	95.4	100.0	26.8	73.2	100.0	80.7	19.3	100.0	90.5	9.5	100.0
Yes	5.9	94.1	100.0	21.2	78.8	100.0	79.2	20.8	100.0	93.0	7.0	100.0
Chi-square	[p=0.014]			[p=0.774]			[p=0.479]			[p=0.973]		

Third, the association between sexual violence and fertility desire tends to be weak and non-significant, regardless of the number of children women already have. However, the desire for another child is significantly associated with the experience of physical violence for women with one or two children and with the experience of emotional violence for those with two or more children.

Multivariate Analysis

Zero-order associations presented above present an incomplete picture. They could very well be spurious because in many instances both spousal abuse and women's desire for children are known to be most prevalent among those from disadvantaged socioeconomic backgrounds. Also, at times the original associations are suppressed because of the inclusion of a third variable. To deal with these issues, we turn to multivariate analysis. Given the categorical nature of the dependent variable – fertility desire – we use a binary logistic regression model to estimate the effects of the three measures of spousal violence on the odds of desiring to have a (another) child. The reference category is identified as “not desiring to have a (another) child.” Table 3 reports the results of three logistic regression models. Model 1 is a repeat of Table 2 and does not include any control variable. Model 2 includes two basic demographic variables – the woman's age and marital duration – which are closely linked to fertility desire and to some extent to spousal violence. Model 3 includes all independent variables. Odds ratios (OR) and their 95% confidence intervals (CI) are estimated for each category of independent variables. The odds ratios for control variables are not shown in these tables, although they are available on request.

Consistent with earlier observations, we find that in each model the relationship of both physical and emotional violence with fertility desire is not significant for women without any children as well as for those with three or more children. Although women who have experienced some types of spousal abuse are more likely than those without such experience to want a child, the difference between the two groups of women is not significant. The main reason for the non-significant association among women without any children is that almost all Indian women want to have a child regardless of marital problems. The reason for the non-significant association for women with three or more children is different. Most of these women may have already achieved their desired family size, and therefore spousal abuse may not matter much for them as far as their desire for more children is concerned.

The picture is very different for women with only one child. As shown in Model 1, at the zero-order level women who have experienced some sort of physical abuse are 32 percent more likely than those with no such experience to want to have another child (OR = 1.32; 95% CI = 1.06, 1.64). The association is elevated with the inclusion of the woman's age and marriage duration in Model 2 (OR = 1.44; 95% CI = 1.12, 1.85), which points to the suppression effect of these two confounders. Interestingly, however, when the remaining confounders are included in Model 3, the association between the two variables is not significant anymore. The picture is somewhat similar for women with two children as well. It is possible – indeed likely – that the desire for an additional child among women who have been subjected to physical violence is

explained away by their background characteristics.

The association between the experiences of emotional violence and fertility desire is more revealing. The association is not significant for women with one child but highly significant for those with two children. At the zero-order level (Model 1), women with two children who have been subjected to emotional

violence are 50 percent more likely than those without such experience to want to have another child (OR = 1.50; 95% CI = 1.16, 1.95). Once again, the association between the two variables is elevated when women’s age and marital duration are controlled. However, it is attenuated substantially when all confounders are taken into account in Model 3, yet remains significant (OR = 1.37; 95% CI = 1.02, 1.83).

Table 3 Estimated Odds Ratios (Confidence Intervals in parentheses) for Logistic Regression Models of the Effect of Physical, Emotional, and Sexual Violence on Women's Desire to Have a (another) Child, by Number of Living Children

Form of Spousal Violence in the Past 12 Months	Model 1A	Model 2A	Model 3A
Physical Violence			
Women with 0 Child (N = 2,761)			
No			
Yes	0.77 (0.24 - 2.49)	0.13*** (0.04 - 0.40)	0.80 (0.31 - 2.12)
Women with 1 child (N= 7,481)			
No			
Yes	1.36 (0.92 - 1.99)	0.77 (0.39 - 1.51)	1.40 (0.87 - 2.26)
Women with 2 children (N = 9,055)			
No			
Yes	1.10 (0.77 - 1.55)	0.97 (0.67 - 1.40)	1.03 (0.71 - 1.51)
Women with 3 or more children (N = 7,011)			
No			
Yes	0.72 (0.45 - 1.13)	0.77 (0.32 - 1.83)	0.62* (0.39 - 0.99)
Emotional violence			
Women with 0 Child (N = 2,761)			
No			
Yes	0.12*** (0.05 - 0.34)	0.93 (0.29 - 2.94)	0.25* (0.07 - 0.83)
Women with 1 child (N= 7,481)			
No			
Yes	0.82 (0.40 - 1.68)	1.31 (0.81 - 2.13)	0.81 (0.38 - 1.73)
Women with 2 children (N = 9,055)			
No			
Yes	0.95 (0.64 - 1.41)	0.85 (0.58 - 1.24)	0.84 (0.56 - 1.27)
Women with 3 or more children (N = 7,011)			
No			
Yes	0.66 (0.30 - 1.46)	0.59* (0.35 - 0.99)	0.71 (0.32 - 1.59)
Sexual violence			
Women with 0 Child (N = 2,761)			
No			
Yes	0.77 (0.24 - 2.49)	0.81 (0.31 - 2.13)	0.92 (0.29 - 2.93)
Women with 1 child (N= 7,481)			
No			
Yes	1.36 (0.92 - 1.99)	1.43 (0.88 - 2.33)	1.34 (0.82 - 2.19)
Women with 2 children (N = 9,055)			
No			
Yes	1.10 (0.78 - 1.54)	1.04 (0.71 - 1.51)	0.92 (0.63 - 1.32)
Women with 3 or more children (N = 7,011)			
No			
Yes	0.72 (0.45 - 1.13)	0.63* (0.40 - 1.00)	0.60 (0.36 - 1.00)

*** p<0.001, ** p<0.01, * p<0.05

Note: Mode 1 does not include any control variable. Model 2 controls for women's age and marital duration. Model 3 includes all independent variables listed in Table 1. Odds ratios are not shown for control variables.

The picture is different for women who have been subjected to sexual violence. The association between sexual violence and fertility desire is not significant for women with one or two children. It is somewhat significant for those with three or more children although the direction of association is negative. When controlled for their age and marital duration, women who have been subjected to sexual violence are 37 percent less likely to want more children than those who do have such experience (OR = 0.63; 95% CI = 0.40, 1.00). However, all independent variables are considered the association is barely significant (OR = 0.60; 95% CI = 0.36, 1.00). The reasons for this finding are not clear. It is possible that women who have been subjected to forced sex for a long time and consequently had so many unwanted children do not want any more children. Perhaps it is too late for them to patch up their relationship by having children.

Discussion and Conclusions

In this study, we examined the effects of spousal violence on women's desire for a (another) child. Our results suggest that the effect depends on the form of violence and the number of children women have. There are three major findings of the study. First, we find that spousal violence of any kind whether it is physical, emotional, or sexual does not have a significant bearing on fertility desire among women without any children. It is not significant because in the Indian socio-cultural context almost all women want to have a child regardless of their socioeconomic background, and it is especially true for zero-parity women. There is a stigma attached to childlessness and for various socio-cultural reasons, women want

to have a child shortly after their marriage. National Family Health Surveys carried out since 1992-93 clearly show that just 2 to 3 percent of married women remain childless by the end of their reproductive life—a level of infecundity in most populations.

Second, physical violence is not causally associated with fertility desire. Although consistent with our theoretical expectations, at the zero-order level the experience of physical violence is positively and significantly associated with fertility desire among women with one or two children, when pertinent background variables are held constant, the association between the two variables disappears. Women who have been subjected to physical abuse perpetrated by their husbands want more children not because they have had turbulent spousal relationships per se but because they come from disadvantaged socioeconomic backgrounds. There is enough evidence that lower socioeconomic status is primarily responsible for both physical violence and the desire for more children. It is, therefore, reasonable to conclude that the positive association between physical violence and fertility desire is indeed spurious.

Third, sexual violence is also weakly associated with fertility desire, although there is some indication that among women with three or more children, those who have been subjected to sexual violence are less likely than those with no such experiences to want another child. It is possible—indeed likely—that women who have been subjected to forced sex by their husbands for a long time and consequently had many unwanted children do not want any more children. Perhaps it is too late for them to

patch up their relationship by having more children. However, given the marginally significant association between the two variables, caution should be exercised in making any firm conclusion about the effect of sexual violence perpetrated by husbands on wives' fertility desire.

Fourth, emotional violence has a positive—albeit small—effect on the desire for an additional child among women with two children and it is sustained even when pertinent confounders are held constant. The question arises as to why emotional violence does not trigger a similar response among women with one child. It is possible that, unlike physical violence, emotional violence takes time to influence one's thinking and behavior. Its effect may linger and the affected woman may take some time to realize that something is not right in their relationship and what she could do to avoid the abuse. Having another child could be a strategy for these women to stabilize the relationship with their husbands.

Finally, all in all, there is little evidence that spousal violence depresses fertility desire among women; if anything, it encourages them to want to have another child, probably to stabilize their marital relationship. This finding runs counter to the studies that find turbulent marriages discourage women from having additional children. It is possible that in societies where women have enough choices to dissolve their marriages following abuse by their husbands when subjected to spousal violence, they may not want to have more children. However, in a country such as India where most women are heavily dependent on their husbands and do not have the choice to dissolve their marriage

following spousal abuse, not having a child is not an option.

There is ample evidence that children born in turbulent marriages and abusive relationships are at an increased risk of adverse outcomes (Holt, Buckley, and Whelan 2008). Studies also find that the arrival of a new child does not necessarily improve marital relationships (Lillard and Waite, 2008; Waite and Lillard 1991). Is it the right decision for an abused woman to have another child? How to help abused women make a rational decision to have or not to have an additional child is a challenge for health and family planning workers.

There are three major strengths of this study. First, unlike several previous studies that used lifetime experiences of spousal violence, this study used a current measure, which refers to women's experiences of some form of abuse that was perpetrated by their husbands in the past year. Second, this study focuses on fertility desire for children as the dependent variable, which was measured by asking women if they desired to have a (another) more child. Many previous studies used the actual reproductive performance of women, which included intended as well as unintended components of childbearing (Rijken and Liefbroer 2009; Sharma and Tripathi 2013). In contrast, the desire for children is supposed to be intentional and perspective. This variable is known to be strongly associated with current and future fertility outcomes (Bongaarts 1990; Morgan and Rackin 2010; Schoen et al. 1999). Third, in this study, the direction of causality flows from spousal violence to the desire for children, thereby allowing us to infer a

cause-and-effect relationship between the two variables.

The study is not without limitations. First, reporting on experiences of spousal violence may be affected by recall bias. However, the measure used in this study (i.e., violence in the past twelve months) is likely to be of much higher quality than that of lifetime experiences of spousal violence, which has been used in several previous studies. However, reports on emotional and sexual violence remain of poorer quality and probably under-estimated because of the definitional problems as well as the stigma attached to reporting them (Ruiz-Pérez, Plazaola-Castaño, and Vives-Cases 2007). Second, this study used a global measure of women's desire for additional children. It is possible that while some women may like to defer childbearing for a while, others may not want to have any children at all. For a more revealing exposition, it would have been more appropriate to ask women to report their desires during a reference period (e.g., within one year, two years, three years, and so on). Third, this study was not able to examine the reasons why abused women want (or do not want) more children.

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